

In the name of Allah, the Most Gracious, the Most Merciful

Al-Saqri foundation for military sciences
Present

Firing Circuit using Two-Way Radios





This circuit can be used to fire detonators. The pressing “8” or “9” on one radio, will arm the bomb, and pressing “#” will fire an attached detonator. No other numbers or sounds will affect the receiving radio, so only the correct signal from the transmitter will arm and fire the detonator.

Tools Required

- Soldering Iron
- Solder wire
- Solder wick
- Wire Strippers
- Wire Cutters
- Small Pliers
- Small Screwdrivers
- Tape

Parts Required

- Solder Breadboard
- Solid Wire
- Baofeng UV-9R radio with charger
- Baofeng UV-3R radio with charger
- 3.5mm Audio Cable
- 1 HW-005 Module
- 1 5VDC voltage regulator
- 1 SCR (C106DG)
- 2 14 pin DIP Sockets
- 1 CD4069UBE Inverter IC
- 1 CD4073BE AND IC
- 1 Red LED
- 1 Green LED
- 1 Yellow LED
- 3 1kOhm resistors, 0.25W
- 1 2kOhm resistors, 0.25W
- 1 100kOhm resistor, 0.25W
- 1 9V battery housing (with switch)
- 9V battery

Parts Recommended

- 4-Pin Header female connector , for easy attachment of detonator (could be soldered directly the breadboard)
- Extras of all parts required
- Hot-Melt Glue
- Drill and bits

Overview

When built, pressing “8” or “9” on the UV-9R radio will ‘Arm’ the bomb, then, pressing “#” will explode the bomb from up to **10 km** away!

Modifying the Receiving Radio

The Baofeng UV-3R must be taken apart and modified before using it in a firing circuit. Follow these instructions to solder wires to the speaker and to modify the case for the wires to exit.

Step 1

Take apart the UV-3R Radio. Remove the battery, the back cover, and the antenna and knob parts so the radio looks like the picture. You will have to put it back together, so be very careful and gentle to not damage the radio.



Step 2

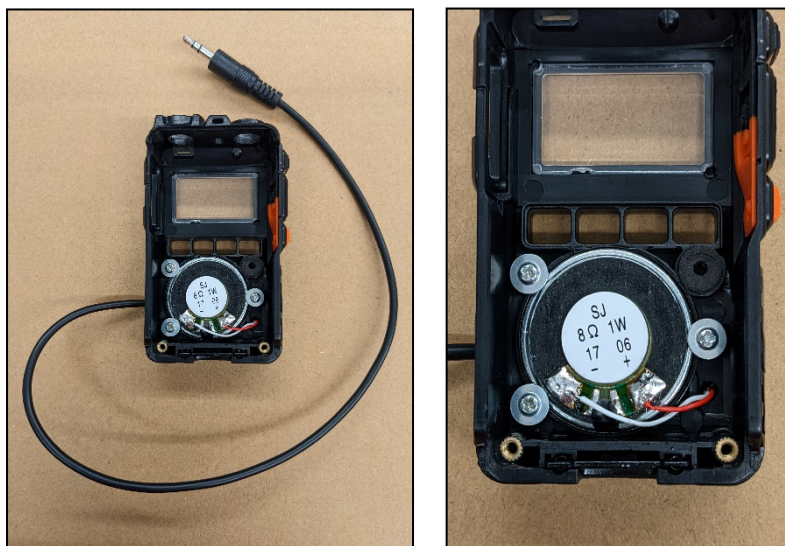
Cut a length of the audio cable, and carefully remove some of the cable jacket. Be careful to not cut or damage the small wire insulation. Strip the insulation off of the individual wires.

Step 3

Drill or cut a hole in the front piece of the plastic radio housing big enough for the audio cable to fit through.

Step 4

Solder the two wires to the speaker connections. If needed, secure the wires until the radio is put back together, then secure the cable around the hole in the radio housing.



Step 5

Put the radio back together, the same way as it came apart. Make sure to put in all the screws so the electronics board is held securely in place.

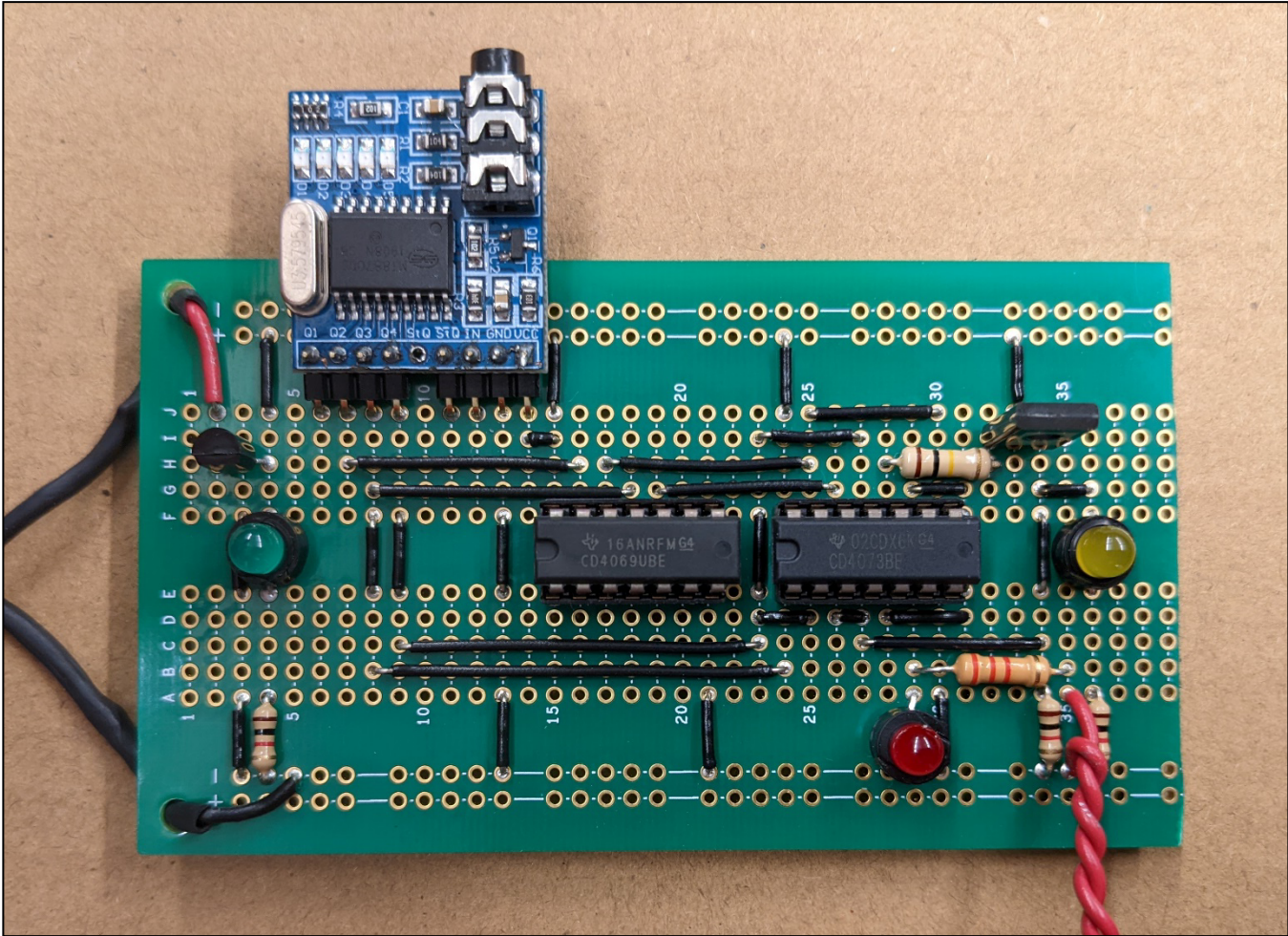
Build the Circuit

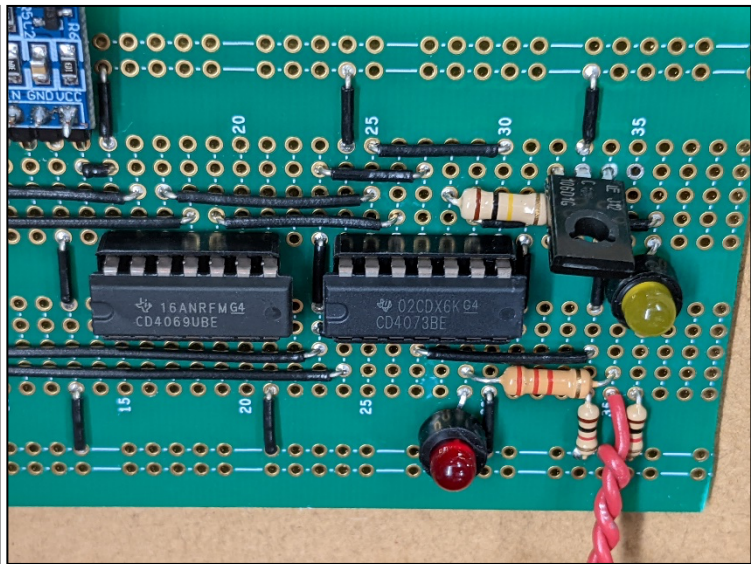
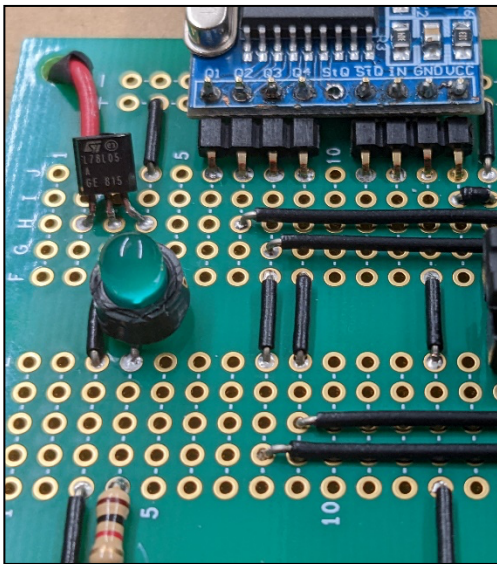
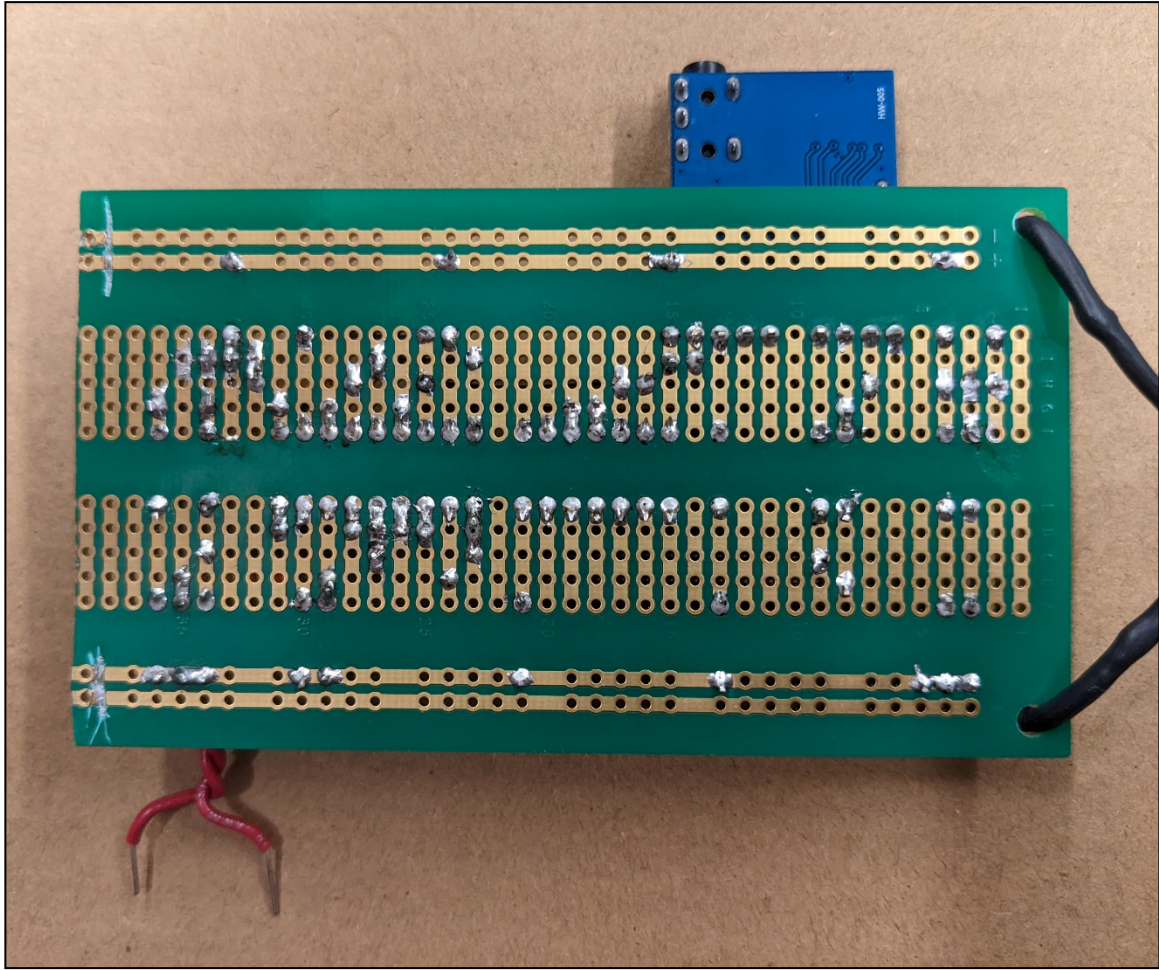
It is recommended to have patience in this part, and build the circuit exactly as the pictures show. Pay close attention to the columns and rows. If any part is backwards or incorrect, then the circuit may fail to fire the detonator. It is important to use the solder board to maintain good connections.

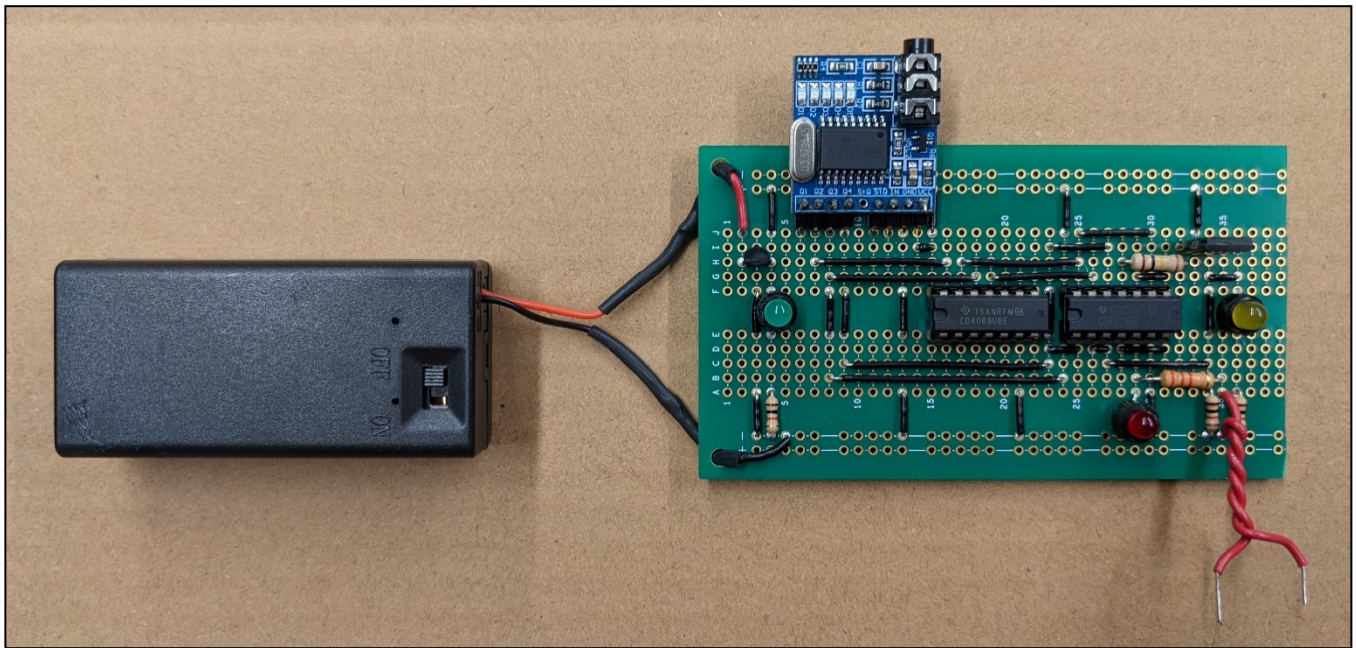
Caution! Do not connect the detonator until you are ready for it to explode. The Red light turning on will ensure operation of the detonator during the build and test.

Build

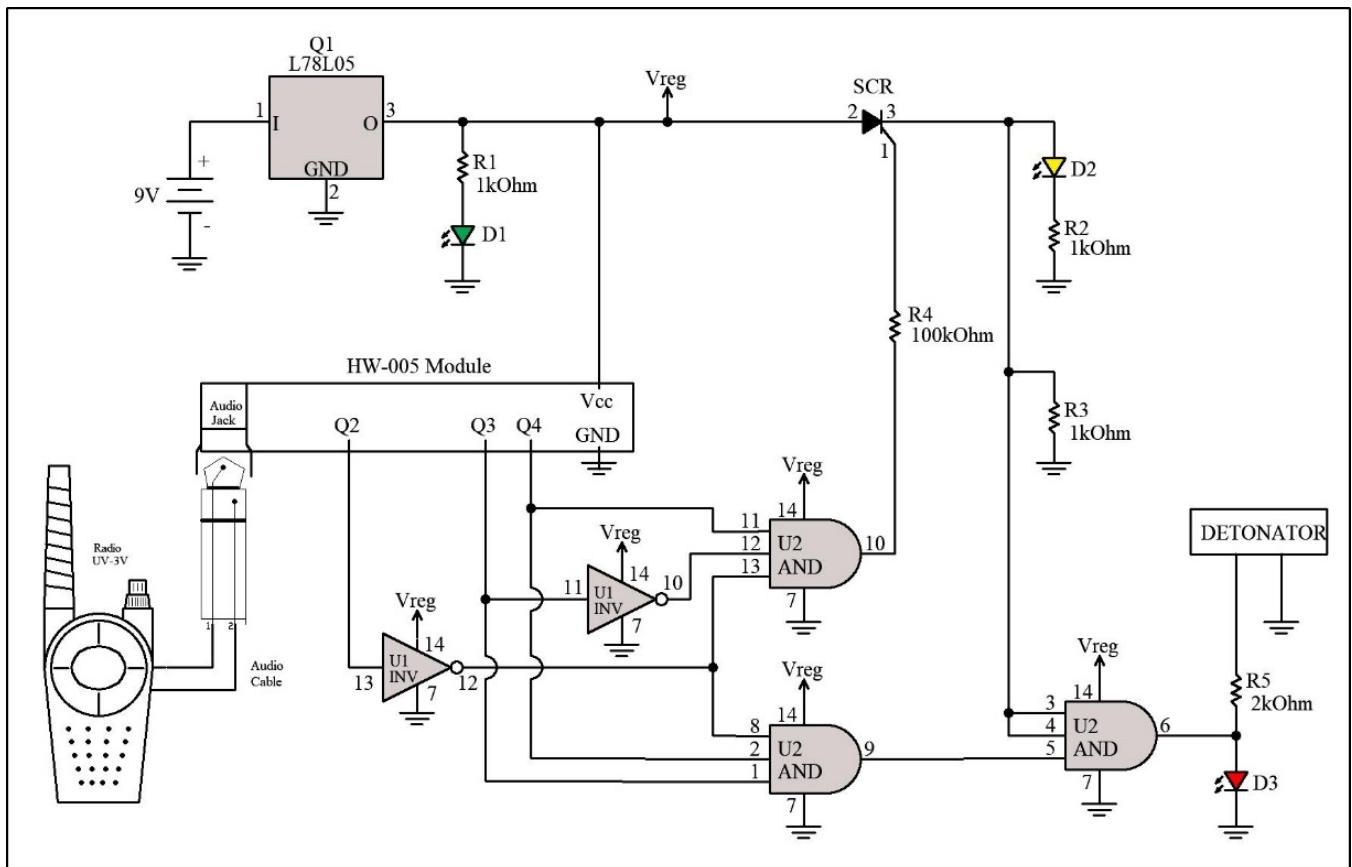
- Layout the components EXACTLY as shown in the pictures so the same connections are made. Pay very close attention to the holes in the rows and columns. If your project is misaligned, then it will not work.
- Use the soldering iron and solder to make the connections on the bottom of the Solder Breadboard.
- Attach the blue HW-005 module last.
- Snip the extra leads off the bottom to smooth the bottom of the board.
- Pay close attention to the pictures, the Red wires go to the detonator.







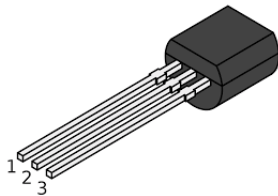
Wiring Diagram



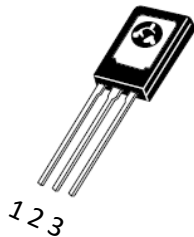
Important Notes

- Pay attention to the pin numbers of the two ICs. If wrong connections are made, it will not work.
- R1, R2, and R3 are 1kΩ resistors, R4 is a 100kΩ resistor, and R5 is a 2kΩ resistor.

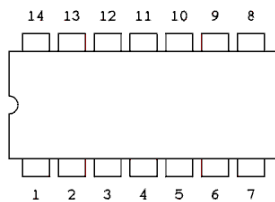
Wiring Diagram for Q1 (L78L05)



Wiring Diagram for the SCR (C106DG)



Wiring Diagram for the Inverter (U1) and the AND (U2)



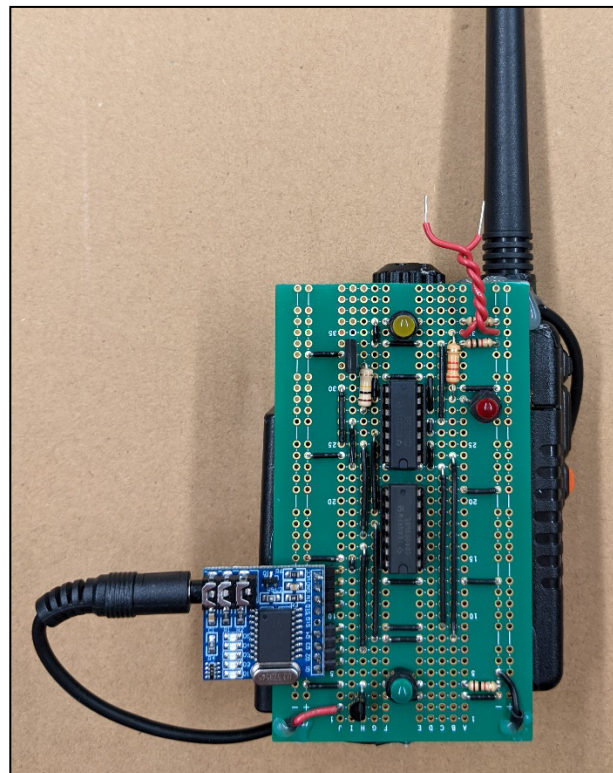
Operation

- The Green LED is on when the battery is turned on.
- The Yellow LED is on after “8” or “9” has been pressed, and the bomb is ARMED.
- The Red LED is on after “#” has been pressed, and the detonator will FIRE.
- The HW-005 module has red lights that change when a number is sent from the UV-9R Radio.
- Use the manuals for the UV-3R and the UV-9R radios to configure the frequency to MATCH. 437.425 is a good number – they must match to work. The two marked numbers on the radio screens must match. To test, use the radios to try to communicate, audio in to one, should come out of the other.



Assembly

If desired, use hot-melt glue to connect the UV-3R Radio, the Solder Board, and the battery pack to create a compact system to attach to the explosive. The red wires go to the detonator.



Done

And God is the one who provides success

**To contact Al-Saqari Foundation send the keyword
"link" to receive our communication bot to:**

@Sqr100

Al-Saqri foundation for military sciences

